

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1 and 2 (canceled)

Claim 3 (currently amended): An ion mobility sensor for simultaneously detecting both ion and molecules, including:

a hollow housing;

a glow discharge ionizer mounted to one end of said hollow housing, wherein said glow discharge ionizer includes a first hollow flow tube and a pointed member coaxially mounted in said first hollow flow tube; and

a glow discharge detector mounted to an opposite end of said hollow housing, wherein said glow discharge detector includes a second hollow flow tube and a pointed member coaxially mounted in said second hollow flow tube.

Claim 4 (currently amended): The ion mobility sensor of Claim 3, wherein said first and second hollow ~~tube of each of said glow discharge ionizer and said glow discharge detector~~ is flow tubes are mounted in opposite ends of said hollow housing.

Claim 5 (original): The ion mobility sensor of Claim 4, wherein said glow discharge ionizer and said glow discharge detector are coaxially mounted in said housing and are coaxially aligned one with another.

Claim 6 (currently amended): The ion mobility sensor of Claim 5, additionally including a pair of conductive members mounted around said first and second hollow flow tubes of ~~said ionizer and said detector~~, in contact with opposite ends of said hollow housing, and operatively connected to a power supply.

Claim 7 (original): The ion mobility sensor of Claim 6, additionally including a plurality of conductive members mounted in spaced relation along a length of said hollow housing, and electrically connected to ground via a plurality of resistors.

Claim 8 (original): The ion mobility sensor of Claim 7, wherein each one of said plurality of resistors is mounted intermediate an adjacent pair of said plurality of conductive members.

Claim 9 (original): The ion mobility sensor of Claim 8, wherein said hollow housing is composed of a plurality of sections, and wherein said plurality of conductive members are each mounted intermediate adjacent pairs of said plurality of housing sections.

Claim 10 (original): The ion mobility sensor of Claim 9, wherein each of said plurality of conductive members has an opening therethrough.

Claim 11 (original): The ion mobility sensor of Claim 10, wherein each opening in said plurality of conductive members is in alignment with said pointed member of each of said glow discharge ionizer and said glow discharge detector.

Claim 12 (original): The ion mobility sensor of Claim 11, wherein said pointed members of said glow discharge ionizer and said glow discharge detector are mounted such that points of said pointed member are aligned with and directed toward each other.

Claim 13 (currently amended): The ion mobility sensor of Claim 12, in combination with ~~an~~ as a chromatograph.

Claims 14 and 15 (canceled)

Claim 16 (currently amended): In an ion mobility sensor, the improvement comprising:
a mechanism for simultaneously detecting both ions and molecules passing
therethrough,

wherein said mechanism includes a pair of spaced aligned glow discharge
devices, one functioning as an ionizer, and one functioning as a detector for ions and
molecules, and

wherein each of said glow discharge devices including a hollow flow tube and a
pointed member coaxially mounted in said hollow flow tube.

Claim 17 (new): An ion mobility sensor for simultaneously detecting both ion and molecules, including:

a hollow housing;

a glow discharge ionizer mounted to one end of said hollow housing, wherein said glow discharge ionizer includes a hollow tube and a pointed member coaxially mounted in said hollow tube;

a glow discharge detector mounted to an opposite end of said hollow housing, wherein said glow discharge detector includes a hollow tube and a pointed member coaxially mounted in said hollow tube,

said hollow tube of each of said glow discharge ionizer and said glow discharge detector is mounted in opposite ends of said hollow housing, and said glow discharge ionizer and said glow discharge detector are coaxially mounted in said housing and are coaxially aligned one with another; and

a pair of conductive members mounted around said hollow tubes of said ionizer and said detector, in contact with opposite ends of said hollow housing, and operatively connected to a power supply.

Claim 18 (new): The ion mobility sensor of Claim 17, additionally including a plurality of conductive members mounted in spaced relation along a length of said hollow housing, and electrically connected to ground via a plurality of resistors.

Claim 19 (new): The ion mobility sensor of Claim 18, wherein each one of said plurality of resistors is mounted intermediate an adjacent pair of said plurality of conductive members.

Claim 20 (new): The ion mobility sensor of Claim 19, wherein said hollow housing is composed of a plurality of sections, and wherein said plurality of conductive members are each mounted intermediate adjacent pairs of said plurality of housing sections.

Claim 21 (new): The ion mobility sensor of Claim 20, wherein each of said plurality of conductive members has an opening therethrough.

Claim 22 (new): The ion mobility sensor of Claim 21, wherein each opening in said plurality of conductive members is in alignment with said pointed member of each of said glow discharge ionizer and said glow discharge detector.

Claim 23 (new): The ion mobility sensor of Claim 22, wherein said pointed members of said glow discharge ionizer and said glow discharge detector are mounted such that points of said pointed member are aligned with and directed toward each other.

Claim 24 (new): The ion mobility sensor of Claim 23, in combination with a chromatograph.